

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on December 18, 2002, and the references cited therewith.

Claim 59 is amended, no claims are canceled, and no claims are added; as a result, claims 46, 47, and 57-82 are now pending in this application.

§103 Rejection of the Claims

Claims 58-59 were rejected under 35 USC § 103(a) as being unpatentable over Ikeda et al. (U.S. 5,239,196) in view of Xu et al. (U.S. 6,217,721 B1).

The rejection states that, "Applicant does not traverse the specific reference to column 26, lines 9- 11, of the teaching by Xu et al of the formation of a titanium alloy layer of TiAl_3 ."

Xu appears to show a layer of TiAl_3 as noted by the Examiner at column 26, lines 9-11, however, Xu is silent regarding a specific location of the layer of TiAl_3 . Applicant presumes that (given the method of forming the layer of TiAl_3 described in Xu) the layer of TiAl_3 is formed from the third sublayer 164 of the three sublayers described in column 26, lines 5-8, when exposed to aluminum at elevated temperatures. Xu does not teach that the layer of **pure titanium 160** (column 12, line 54) overlying the walls of the contact hole are converted to an alloy. Ikeda, as noted by the Examiner on page 4 of the present Office Action, also does not teach a titanium alloy layer overlying walls of a contact hole.

In contrast, Applicant's claim 58 includes a **titanium alloy layer formed overlying walls** and an exposed base layer of a contact hole. Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC § 103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's claim 58.

Regarding claim 59, Applicant respectfully submits that the claim, as amended, is in condition for allowance over Ikeda in view of Xu. As discussed above, Xu appears to show a layer of TiAl_3 , however, a separate layer in Xu that is located overlying walls of the contact opening appears to be pure titanium (element 160, column 12, line 54). Ikeda also does not teach a titanium alloy layer overlying walls of a contact hole.

In contrast, Applicant's claim 59 as amended includes a titanium alloy layer formed on overlying walls of a contact opening. Claim 59 further claims the particular titanium alloy layer formed by a method as described in Applicant's specification.

Because the cited references, either alone or in combination, do not show every element of Applicant's independent claims, a 35 USC § 103(a) rejection is not supported by the references. Reconsideration and withdrawal of the rejection is respectfully requested with respect to Applicant's claim 59.

Allowable Subject Matter

Claims 46-47, 57, and 60-82 were allowed. Applicant acknowledges and thanks the Examiner for allowance of claims 46-47, 57, and 60-82.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 373-6944 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.


Respectfully submitted,

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By their Representatives,

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Amy Moriarty

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